

Amendments to the Claims

Claims 1-6 (Canceled).

7. (Currently Amended) An air purification system for removing airborne particles from an airflow, the system comprising:

a hood having an inlet for receiving the airflow from a space beneath the hood and a hood outlet for exhausting the airflow to a duct;

a first filter mounted within the hood and disposed in the airflow to remove therefrom at least some of the airborne particles to produce a first-filtered airflow; and

a second filter mounted within the hood and disposed downstream of the first filter to receive the first-filtered airflow, the second filter having a porous filtration chamber containing at least one filtration member and the first-filtered airflow flows through the filtration chamber and the filtration member removes airborne particles from the first-filtered airflow to produce second-filtered airflow that is exhausted through the hood outlet,

wherein the airflow path between the first and second filters defines a substantially straight path; and

~~The air purification system as recited in claim 1,~~ wherein the filtration member is formed from a ceramic.

8. (Original) The air purification system as recited in claim 7, wherein the second filter further comprising a plurality of ceramic filtration members.

9. (Original) The air purification system as recited in claim 8, wherein the ceramic is porous.

Claims 10 - 12 (Canceled).

13. (Currently Amended) An air purification system for removing airborne particles from an airflow, the system comprising:

a hood having an inlet for receiving the airflow from a space beneath the hood and a hood outlet for exhausting the airflow to a duct;

a first filter mounted within the hood and disposed in the airflow to remove therefrom at least some of the airborne particles to produce a first-filtered airflow; and

a second filter mounted within the hood and disposed downstream of the first filter to receive the first-filtered airflow, the second filter having a porous filtration chamber containing at least one filtration member and the first-filtered airflow flows through the filtration chamber and the filtration member removes airborne particles from the first-filtered airflow to produce second-filtered airflow that is exhausted through the hood outlet,

wherein the airflow path between the first and second filters defines a substantially straight path; and

~~The air purification system as recited in claim 1, wherein the first filter is a centrifugal air filter presenting baffle plates.~~

Claims 14-26 (Canceled).

27. (Currently) An air purification system for removing airborne particles from an airflow, the system comprising:

a hood having an inlet for receiving the airflow and a hood outlet for exhausting the airflow;

a first filter supported by the hood and positioned such that the airflow from the inlet passes through the first filter and at least a portion of the airborne particles therein are removed therefrom to produce a once-filtered airflow;

a second filter separately connected to the hood at a location downstream of the first filter to receive the once-filtered airflow, the second filter having a filtration chamber that contains a plurality of silica filtration members that remove some airborne particles from the once-filtered

airflow to produce second-filtered airflow that is exhausted through the hood outlet; and

~~The air purification system as recited in claim 17,~~ wherein the first filter is a centrifugal air filter presenting a plurality of baffle plates.

Claims 28-31 (Canceled).

32. (Currently Amended) An air filter system for removing airborne particles from air, the combination comprising:

a hood having a top wall and a vertical wall that join to define a hood chamber having an inlet in its bottom for receiving a flow of intake air containing airborne particles and an outlet in its top wall for exhausting the flow of air;

a two-stage filter assembly mounted to the hood and disposed in the hood chamber to define an enclosed space that communicates with the hood outlet, the two-stage filter assembly including:

a first filter for receiving the flow of intake air and being operable to remove airborne particles therefrom to produce once-filtered airflow;

a second filter for receiving the once-filtered airflow and producing twice-filtered air that flows through the enclosed space to the hood outlet, the second filter having a porous filtration chamber containing a plurality of filtration members that remove airborne particles from the once-filtered airflow; and

~~The air filter system as recited in claim 28,~~ wherein the filtration members are formed from a ceramic.

33. (Original) The air filter system as recited in claim 31, wherein the ceramic is porous.

Claims 34-37 (Canceled).

38. (Currently Amended) An air filter system for removing airborne particles from air, the combination comprising:

a hood having a top wall and a vertical wall that join to define a hood chamber having an inlet in its bottom for receiving a flow of intake air containing airborne particles and an outlet in its top wall for exhausting the flow of air;

a two-stage filter assembly mounted to the hood and disposed in the hood chamber to define an enclosed space that communicates with the hood outlet, the two-stage filter assembly including:

a first filter for receiving the flow of intake air and being operable to remove airborne particles therefrom to produce once-filtered airflow;

a second filter for receiving the once-filtered airflow and producing twice-filtered air that flows through the enclosed space to the hood outlet, the second filter having a porous filtration chamber containing a plurality of filtration members that remove airborne particles from the once-filtered airflow; and

~~The air filter system as recited in claim 28,~~ wherein the first filter is a centrifugal filter.

39. (Original) The air filter system as recited in claim 38, wherein the centrifugal filter presents baffle plates extending into the intake air.

Claims 40-47 (Canceled).

48. (Currently Amended) A ventilation system for removing air from a food cooking area, the combination comprising:

a hood disposed above said food cooking area, the hood having walls which define a hood chamber for receiving intake air containing airborne particles from the food cooking area below;

a duct connected to an exhaust outlet on the hood for exhausting air from the hood chamber; and

a two-stage filter assembly mounted to the hood and disposed in the hood chamber to filter airborne particles from intake air flowing from the food cooking area to the exhaust outlet, the filter assembly including:

a first filter for receiving the intake air and being operable to remove airborne particles therefrom to produce once-filtered airflow; and

a second filter for receiving the once-filtered airflow and producing a twice-filtered air that flows directly to the exhaust outlet, the second filter having a filtration chamber containing a regenerative filtration material selected from the group consisting of silica, ceramic, diatomaceous earth, and zeolite; and

~~The ventilation system as recited in claim 41,~~ wherein the first filter comprises a centrifugal filter.

49. (Currently Amended) A ventilation system for removing air from a food cooking area, the combination comprising:

a hood disposed above said food cooking area, the hood having walls which define a hood chamber for receiving intake air containing airborne particles from the food cooking area below;

a duct connected to an exhaust outlet on the hood for exhausting air from the hood chamber; and

a two-stage filter assembly mounted to the hood and disposed in the hood chamber to filter airborne particles from intake air flowing from the food cooking area to the exhaust outlet, the filter assembly including:

a first filter for receiving the intake air and being operable to remove airborne particles therefrom to produce once-filtered airflow; and

a second filter for receiving the once-filtered airflow and producing a twice-filtered air that flows directly to the exhaust outlet, the second filter having a filtration chamber containing a regenerative filtration material selected from the group consisting of silica, ceramic, diatomaceous earth, and zeolite; and

~~The ventilation system as recited in claim 48, wherein the centrifugal first filter presents baffle plates extending into a path through which the intake air flows as it passes through the first filter.~~

Claims 50-56 (Canceled).

57. (New) A method for filtering air drawn from above a cooking area and into an exhaust duct, the steps comprising:

producing once filtered air by passing the air through a first filter which defines by a plurality of walls an air flow path that causes airborne particles in the air to impact the walls and be deposited on the walls and to thereby be removed from the air;

producing twice filtered air by passing the once filtered air through a second filter comprised of a plurality of porous filtration members that absorb airborne particles in the once filtered air; and

conveying the twice filtered air to the exhaust duct.

58. (New) The method as recited in claim 57 which includes:

periodically regenerating the second filter to remove a substantial portion of the airborne particles absorbed by the porous filtration members.

59. (New) A filter for use in a hood disposed over a cooking area, the combination comprising:

a first filter mounted to the hood and positioned to receive air drawn from the cooking area, the first filter having a plurality of walls that define a path through which the air flows and against which airborne particles are deposited and thereby removed from the air; and

a second filter mounted to the hood and positioned to receive the air drawn from the first filter, the second filter including a plurality of chambers through which the air flows, and each chamber being filled with a plurality of porous filtration members that absorb airborne particles and thereby remove them from the air.

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60. (New) The filter as recited in claim 59 in which each chamber is formed by a pair of spaced screens through which a portion of the air flows, and the chambers are disposed at angles with respect to each other to increase the total combined area of their screens.